***The Role of HLA-DRB1 Gene Polymorphism and Anti HLA–G In The Development Of Acute Leukemia In Egyptian Patients And Their Effect In Disease Resistance Or Susceptibility***

***By***

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***Abstract, background****, expression of certain HLA alleles, was considered susceptible factor to acute leukemia (AML, ALL), there were clear associations between resistance or susceptibility to cancer and (HLA) profile****,*** *this work* ***aims******to*** *investigate role of HLA-DRB1 alleles and anti-HLA-G in the development of acute leukemia in Egypt****, patients and methods,*** *(40) patients with acute leukemia aged from 4 to 60 years (23 male and 17 female), and 20 healthy subjects of the same age and sex as a control, ethical review board approved the work , all were tested for anti-HLA-G by four-color flowcytometry was performed using FACSCanto* ***(BD Biosciences, USA****. HLA-DRB1 by Sequence Specific oligonucleotide PCR (SSO-PCR),**DNA purification by (Spin Protocol),Qiagen, Hilden, Germany, QIA amp DNA Mini, thermal cyclers BIO-RAD PTC-100 (USA), then hybridization with DNA probes and detection of alleles,**the INNO-LiPA HLA typing, Fujirebio Group, Belgium, with the INNO-LiPA HLA-DRB1 Plus kit, Cat. No.# 58355 ,* ***statistical analysis,*** *SPSS 19 edition was used, gene frequencies of HLA-DRB1, were calculated by direct count,* ***results*** *there was an allelic association between HLA-DRB1,and AML, difference between DRB1\*13 and was significant p = 0.006 , p = 0.016 respectively, HLA-DRB1\*01 not detected in any AML patients in relation to ALL patients, the HLA-DRB1\*13 show high frequency in controls in relative to AML patient (P = 0.006 , 0.001), anti-HLA-G showed no significant values in leukemic patients and control.* ***Conclusion,*** *HLA-DRB1\*13, and HLA-DRB1\*15 alleles were protective while HLA-DRB\*06 and –DRB1\*14 were predisposing factor**for AML* ***.***

***Key words, Acute LeuKemia, HLA polymorphism***